

ANACONDA Copper Company

535 Seventeenth Street
Denver, Colorado 80217
Telephone 303 575-4000

1186092 - R8 SDMS



RECEIVED

SEP 16 1980

WATER QUALITY
CONTROL DIVISION

September 15, 1980

Fred Matter, P. E. Chief,
Monitoring & Enforcement Section
Water Quality Control Division
Colorado Department of Health
4210 East 11th Avenue
Denver, Colorado 80220

Re: Notice of Violation and Cease and Desist Order-
Rico Project.

Dear Mr. Matter:

Attached is the description of work referred to in paragraph 4c of my letter of September 10, 1980 responding to the subject Cease and Desist Order.

Also attached, is a station description for the water quality study mentioned in paragraph 4d of the same letter.

Very truly yours,

John R. Whyte

JRW/jat

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SEP 16 1980

WATER QUALITY
CONTROL DIVISION

Description of Work

St. Louis Tunnel Discharge Water Control Study

The Anaconda Copper Company is the owner of a mining complex near Rico, Colorado. The St. Louis Tunnel is part of this complex. The mine water discharging from the tunnel has historically flowed at a rate which varies 750 - 2,000 gallons per minute. This effluent is not chemically treated. It enters a series of settling ponds and is discharged ultimately into the Dolores River. The discharge is covered by an NPDES permit and does not consistently meet the permit limitations. We are currently involved only in exploration activities.

There are two other discharges which originate on Anaconda Copper Company Property. These flows enter the Dolores River a considerable distance below the discharge from the aforementioned settling ponds. These discharges are from the Santa Cruz mine and the Silver Swan Mine. In July 1980, the discharges from these adits were estimated to be 25 and 60 G.P.M. respectively.

The purpose of this study is to evaluate the alternatives available to the Anaconda Copper Company for treatment of all sources of mine water. The study should be sufficiently detailed

for utilization as the basis for detailed design and construction of the chosen alternative. The study should address all of the following aspects of the problem; however, the list should not be considered all inclusive.

1. Treatability of the mine water. The discharge must meet and preferably be well within effluent limitations.

2. Feasibility of continued use of the settling pond system.

- Can short circuiting be controlled to obtain sufficient retention time at maximum flow?

- How would the 10 year storm be routed around the ponds? The 100 year storm?

- Can surface water run-off be diverted around ponds?

3. If pond system cannot be used, what alternatives are available? Each alternative should also address discharges from the Silver Swan & Santa Cruz mines.

4. A cost estimate ($\pm 25\%$) is to be included for each alternative.

B I D D E R S L I S T

Gibbs & Hill, Inc.
The Dravo Building
1250 14th Street
Denver, Colorado 80202
(303)893-4905

CH~~2~~1 Hill
12000 East 47th
Denver, Colorado 80239
(303)371-6470

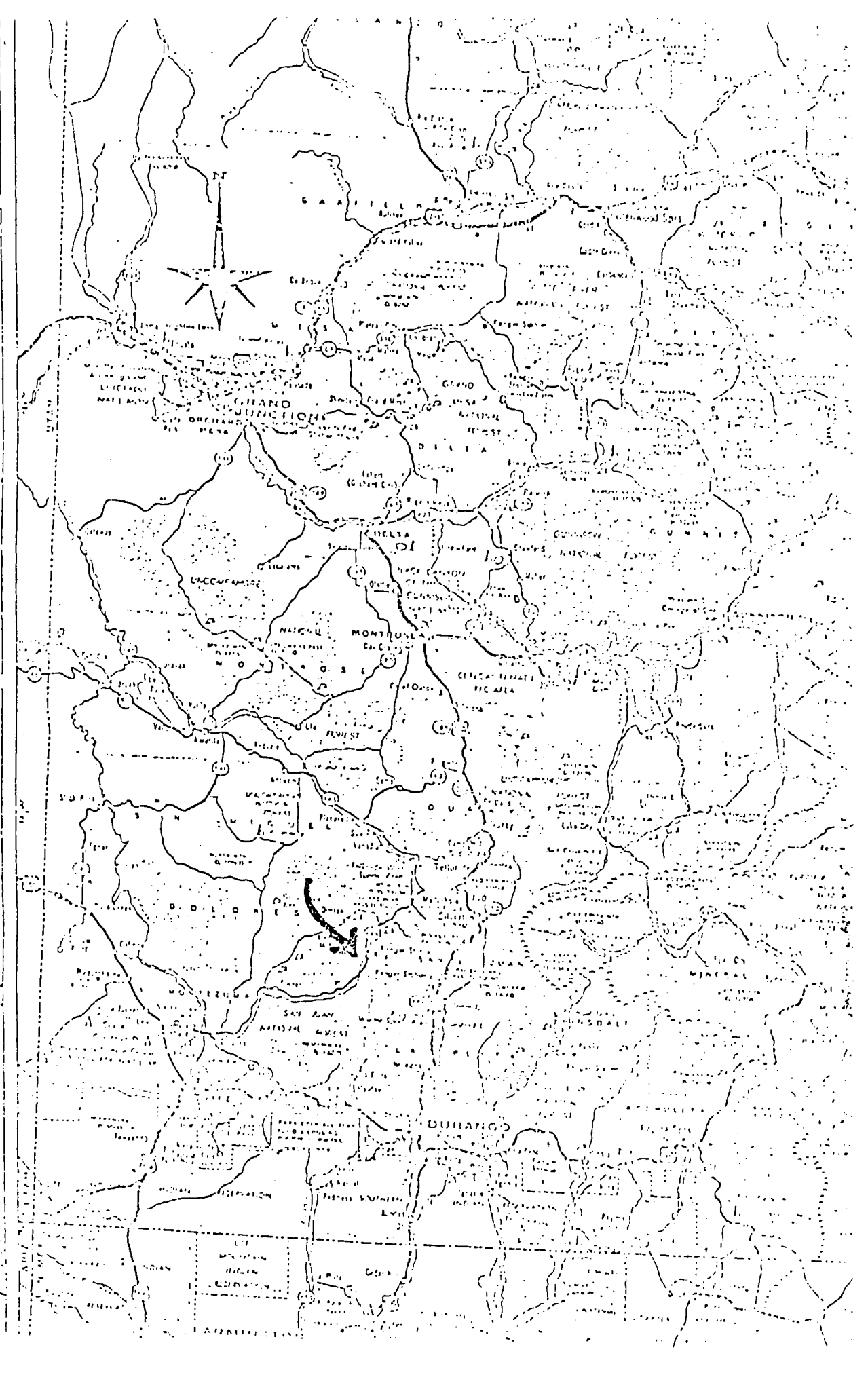
Dames & Moore
605 Parfet Street
Denver, Colorado 80215
(303)232-6262

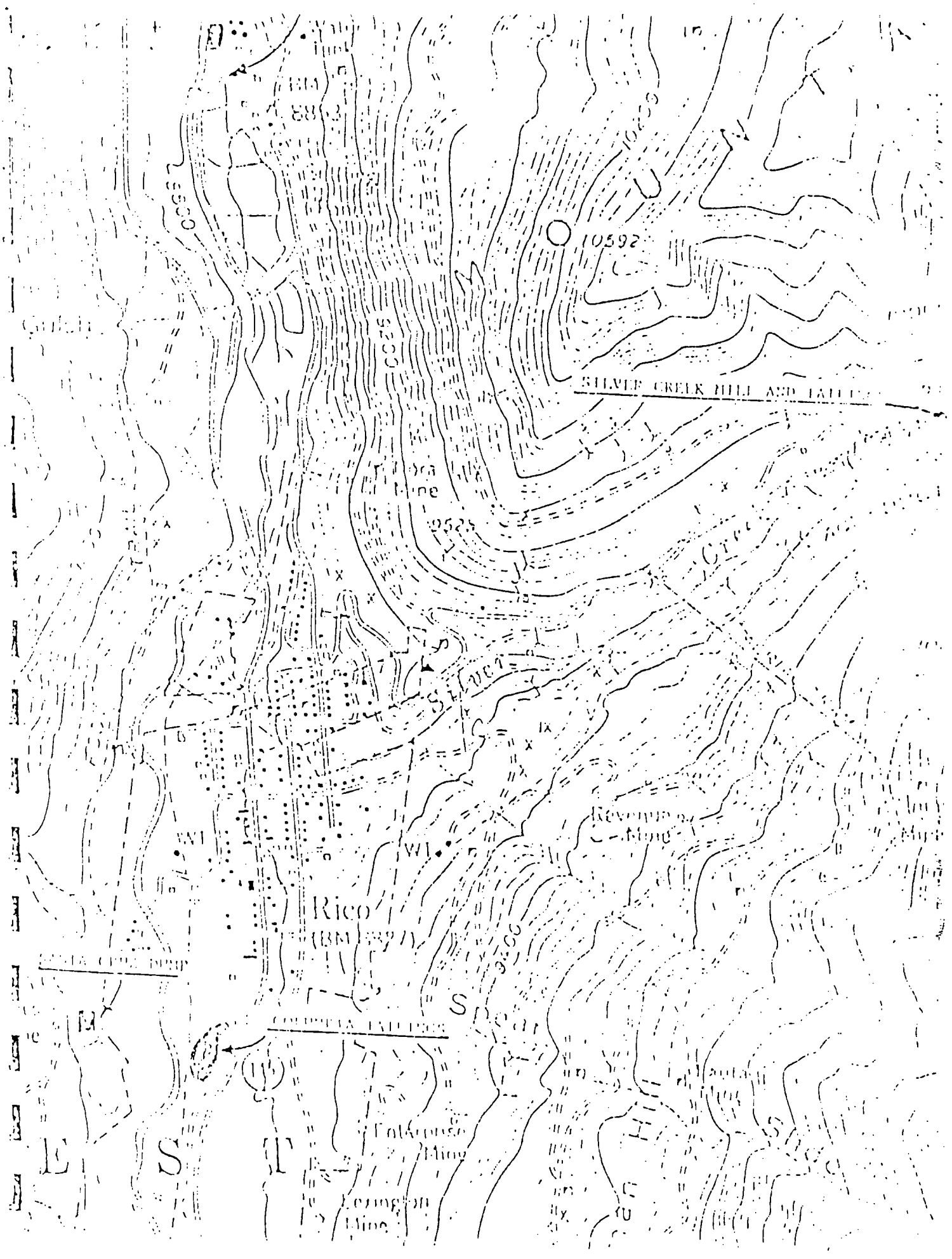
HUS Corp.
Western Env. Services Div.
720 South Colorado Boulevard
Denver, Colorado 80222
(303)758-3438

TRC Environmental Consultants, Inc.
8775 East Orchard Road
Suite 816
Englewood, Colorado 80111
(303)779-4940

PAGE SPRINGS

SECURITY





SILVER CREEK HILL AND FALLS

Rico
(BM 1391)

COTTONWOOD CREEK

Enterprise Mine

Kingston Mine

Hill

Spear

Creek

SILVER CREEK RIVER

E

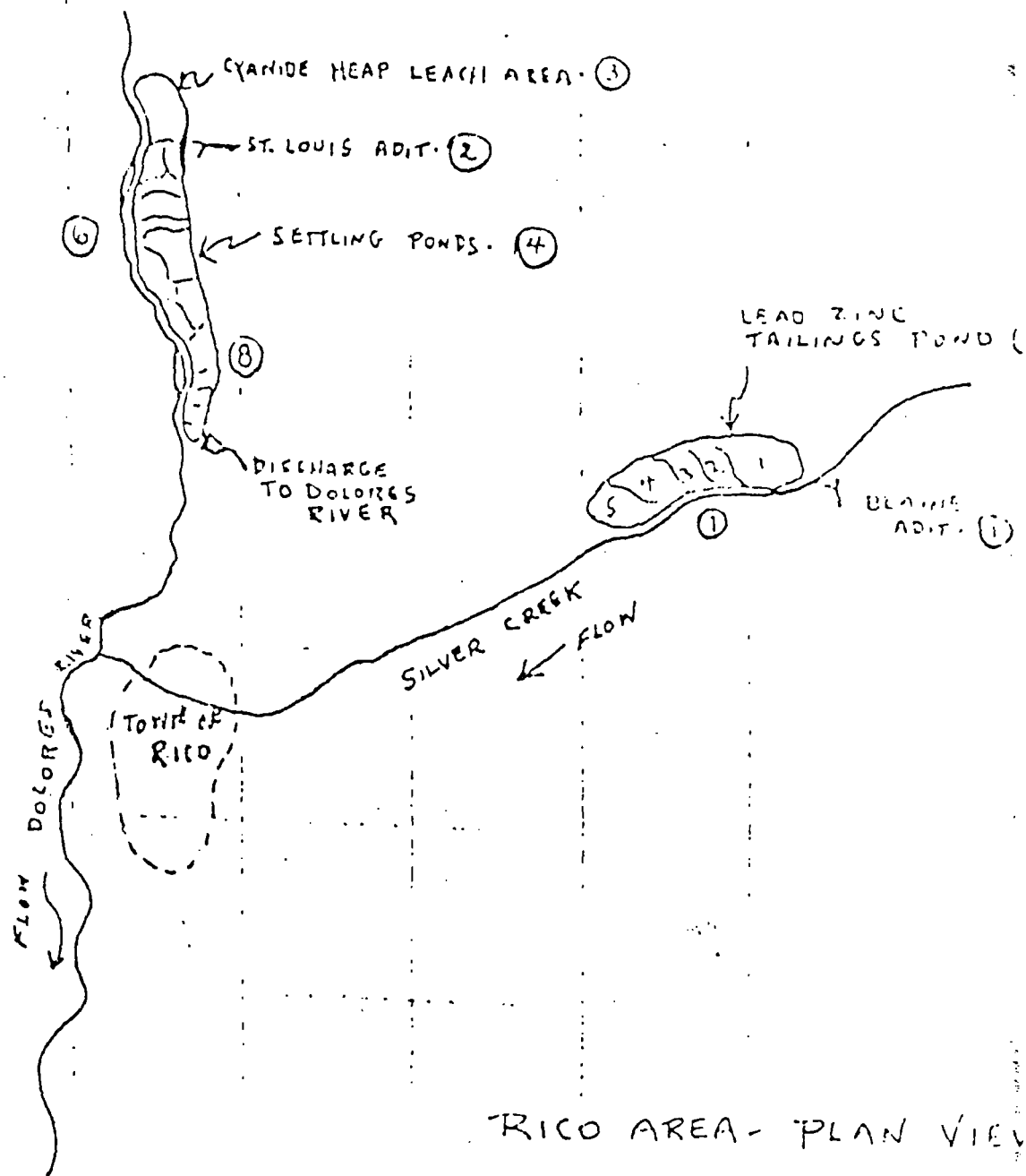
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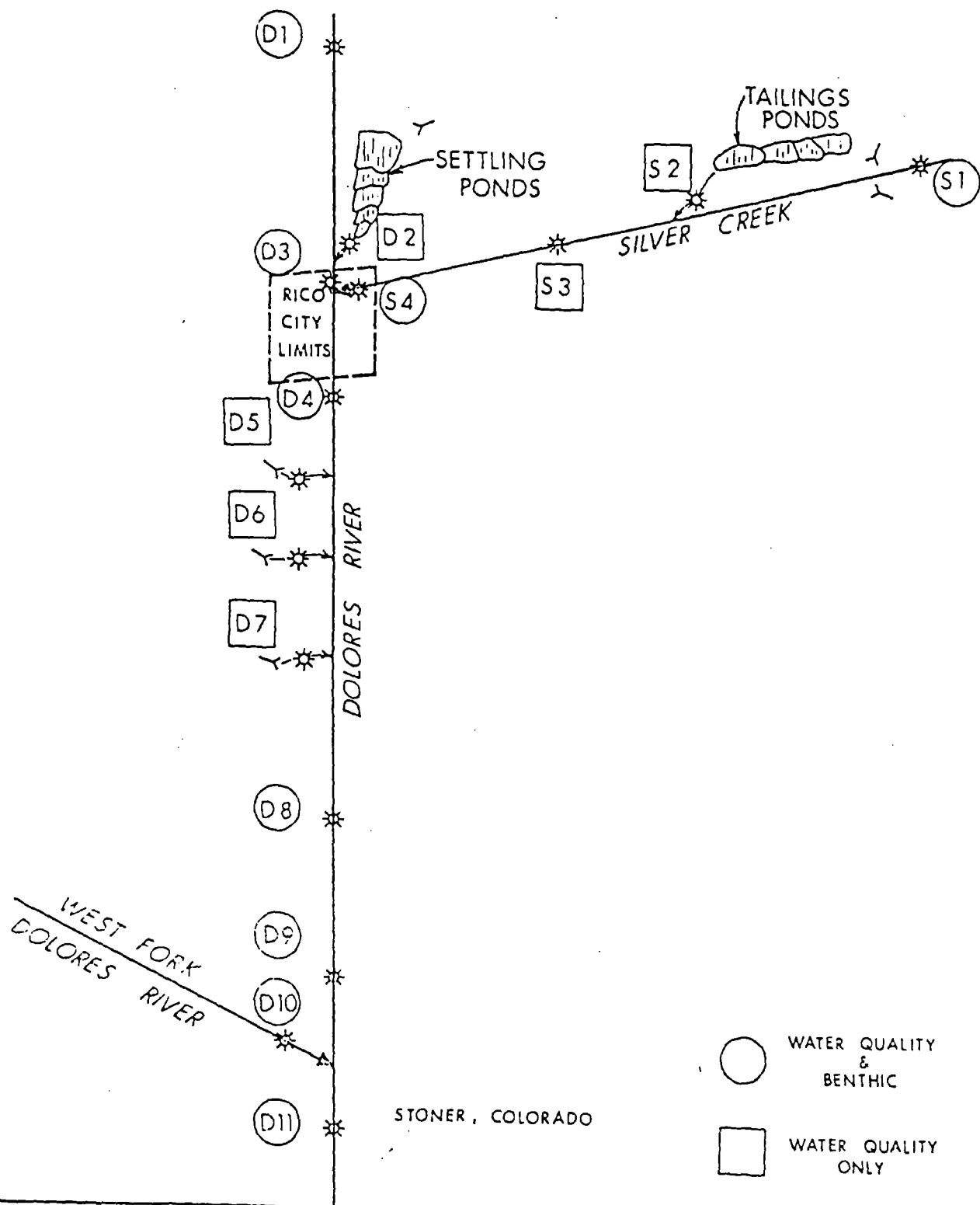
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SCALE 1" = 0.38 MILES

4-10-0

FIGURE 1
POTENTIAL RICO WATER QUALITY
& BENTHIC SAMPLING STATIONS



Rico Surface Water Assessment

Sample Station Descriptions

The attached Table 1 provides conceptual sample station descriptions which should be included in the contractor's proposal. These are shown schematically on Figure 1 which is also attached. Contractor may, if deemed appropriate, add additional stations.

TABLE 1

Conceptual Sample Station Descriptions

- D1 - The Dolores River above the influence of the St. Louis Mine facilities and settling ponds.
- D2 - The St. Louis settling pond discharge as it enters the Dolores River.
- D3 - The Dolores River below its confluence with the St. Louis settling pond discharge but above its confluence with Silver Creek.
- D4 - The Dolores River below its confluence with Silver Creek.
- D5 - The drainage flowing from the Jones Mine adit to the Dolores River.
- D6 - The drainage flowing from the Santa Cruz Mine adit to the Dolores River.
- D7 - The drainage flowing from the Silver Swan Mine adit to the Dolores River.
- D8 - The Dolores River below the influence of the mine drainages associated with D5, D6, and D7.
- D9 - The Dolores River above its confluence with the West Fork of the Dolores River.
- D10 - The West Fork of the Dolores River near its mouth.
- D11 - The Dolores River below its confluence with the West Fork, near Stoner, Colorado.
- S1 - Silver Creek above the influence of the Rico-Argentine Mine Complex.
- S2 - The flow originating below the Silver Creek tailings ponds.
- S3 - Silver Creek below its confluence with station S-2.
- S4 - Silver Creek near its mouth.